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Peer motivational climate in youth sport: A qualitative inquiry

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Abstract

Objectives. Little is known about the influence and nature of the motivational climate initiated by peer groups on children's sport behavior and experiences. To address this research need, in-depth interviews were employed in order to identify the factors that underpin the motivational climate created by peers in youth sport.

Methods. Individually and in small focus groups, 14 boys and 16 girls ($N=30$), aged between 12 to 16 years old from both individual and team sports, were interviewed regarding peer-induced characteristics of their motivational climates.

Results. Using content analyses, the following 11 dimensions of peer climate emerged: cooperation, effort, improvement, mistakes, intra-team competition, intra-team conflict, equal treatment, normative ability, autonomy support, evaluation of competence and relatedness support.

Conclusions. Some of the resulting dimensions are similar to the factors included in existing instruments assessing adult (i.e., PE teacher or coach-created) motivational climates. However, some facets of the climate unique to peer groups were also identified in this study. The theoretical implications of these findings are discussed and suggestions for future research on the peer motivational climate are provided.

Key words: content analysis, peers, motivational climate, psychological needs.

1 The social context that youth sport athletes participate in is shaped by both adults and
2 their similarly aged teammates. However, research on youth sport motivation has mainly
3 focused on the influence of adults (e.g., parents, coach and physical education [PE] teacher),
4 while peer influence has not received much attention. This is unfortunate since both adults
5 and peers can influence the motivation of young athletes (Carr, Weigand & Jones, 2000;
6 Weigand, Carr, Petherick & Taylor, 2001). Many researchers in the past have identified the
7 lack of empirical evidence on peer relationships in physical activity contexts, however, some
8 research attention has been given during the last decade (Brustad, Babkes & Smith, 2001;
9 Ntoumanis & Biddle, 1999; Smith, 2003).

10 Smith (2003) emphasized that peer relationships can contribute to quality physical
11 activity experiences (and vice versa) and that the physical domain is an ideal context for
12 fostering a deeper understanding of these relationships. Issues such as the development of
13 social competence (and its link to perceived athletic competence), peer acceptance and
14 friendship quality are some of the topics that have attracted research interest in youth sport
15 psychology literature (Brustad, 1996; Smith, 2003). The findings of this line of research have
16 shown that children's perceived and actual competence in sport is strongly related to being
17 successful in peer relations and perceiving acceptance by the peer group (Weiss & Duncan,
18 1992). Moreover, children and adolescents who believe that they are regarded as competent
19 by their peers have been found to exhibit higher performance-related positive affect (Duncan,
20 1993). Sport competence is also related to higher peer status (i.e., order of selection and
21 positions in the game; Evans & Roberts, 1987). Moreover, peers as a source of competence
22 information, have emerged as being particularly influential during early adolescence (Horn &
23 Amorose, 1998). Furthermore, greater friendship perceptions have been found to predict
24 choice of tasks and physical activity levels for male and female adolescents (Smith, 1999).
25 This brief overview of the literature shows that there are some studies on peer influence in

youth sport, however there are no studies to date which have examined how peer interactions affect children's achievement motivation in sport. We believe, that peers can exert significant influence on children's motivation and the purpose of this study is to examine some of the ways in which this influence is exerted.

One of the main theoretical frameworks that have been used to study motivation and behavior in youth sport is achievement goal theory. According to this social-cognitive framework, (Ames, 1992; Duda & Hall, 2001; Nicholls, 1989), the major focus in achievement settings is the demonstration of competence and the avoidance of showing incompetence. Individuals can evaluate their competence in two different ways, which will manifest in the adoption of two different achievement goal orientations. The first goal orientation, namely task orientation, is evident when perceptions of competence are self-referenced and based upon personal improvement and exerting maximum effort. The second goal orientation, namely ego orientation, is evident when competence is normatively referenced and inferred by demonstrating superior ability and outperforming others (Nicholls, 1989). A plethora of research studies has demonstrated that high task orientation, compared to high ego orientation, is related to more positive outcomes in youth sport (for a review, see Duda & Hall, 2001).

In addition to dispositional achievement goals, situational factors such as the motivational climate created by significant others can play a substantial role in the activation and direction of children's achievement behavior (Ames, 1992). The term motivational climate refers to perceptions of situational motivational cues and expectations that encourage a particular goal orientation, and at a given point in time, induce a certain goal involvement state. Variations in achievement behavior can be explained by the interplay of individuals' achievement goals and the motivational climate created by significant others (Ames, 1992).

Ames (1992) distinguished between an ego-involving (performance) motivational climate that fosters social comparison and emphasizes normative ability, and a task-involving (mastery) motivational climate, that encourages effort and rewards task mastery and individual improvement. Empirical research (e.g., Newton, Duda & Yin, 2000; Ommunsdsen, Roberts & Kavussanu, 1998; Treasure, 1997), as well as a small-scale meta-analysis (Ntoumanis & Biddle, 1999), have supported the theoretical proposition that a task-involving climate is associated with more adaptive cognitive, affective and behavioral patterns than an ego-involving climate. In a task-involving motivational climate, the athletes perceive that the coach emphasizes personal skill improvement, he/she regards errors are part of learning, and athletes derive satisfaction from personal progress. In contrast, in an ego-involving motivational climate, because feelings of satisfaction depend on how one compares with others, there is emphasis on the demonstration of normative ability and competition with teammates. Such emphasis can create feelings of anxiety, dysfunctional attributions, reduced effort and other maladaptive achievement strategies and beliefs (Ames & Archer, 1988).

Ames (1992), based on the work of Epstein (1989), proposed that task and ego motivational climates consist of certain motivational structures. These structures, which create the TARGET acronym, are: Task (design of learning activities), Authority (locus of decision-making), Recognition (criteria for rewards), Grouping (homogeneous vs. heterogeneous ability), Evaluation (criteria for success/failure) and Timing (pace of instruction). In a task-involving climate, activities that make learning interesting and involve variety and personal challenge are promoted (task), athletes are involved in the decision making and have a choice of tasks (authority), rewards are perceived as informative and recognition is provided based on personal improvement and progress (recognition), opportunities for cooperative group learning and peer interactions are provided (grouping), evaluation is based on personal improvement and task mastery (evaluation), and the time

1 allocated for completing learning activities is adjusted to meet the athletes' needs (time).
2 These structures have been shown to be pertinent to the motivational climate created by
3 coaches and PE teachers (Solmon, 1996; Theeboom, DeKnop, & Weiss, 1995).

4 Research has developed instruments to measure the motivational climates created by
5 PE teachers (Biddle, Cury, Goudas, Sarrazin, Famoze & Durand, 1995; Papaioannou, 1994),
6 coaches (Newton, et al., 2000), parents (White, 1998), as well as sport heroes (Carr &
7 Weigand, 2001). However, the influence of peers in transmitting task-involving versus ego-
8 involving climate cues has not been assessed yet in the sport psychology literature
9 (Ntoumanis & Biddle, 1999).

10 Peers become very influential in early adolescence (Brustad, Babkes, & Smith, 2001)
11 and, therefore, they are likely to have a significant influence on children's motivation.
12 Moreover, according to Treasure and Roberts (1994), motivational climates can override
13 dispositional goals when the latter have not been firmly established, such as during late
14 childhood and early adolescence. There is no empirical evidence yet to support these claims.
15 However there is literature to suggest that peer groups exert significant influence in youth
16 sport and become progressively more important as children grow older. For example, in
17 terms of judging physical competence, younger children (under 10 years old) show
18 preference for adult feedback to judge their competence, while in late childhood and early
19 adolescence, the central source of competence information is peer comparison and feedback
20 (Horn & Weiss, 1991; Weigand et al., 2001).

21 Another motivational theory that could give valuable insights into how peer
22 interactions influence children's motivation in sport is Deci and Ryan's (2000) self-
23 determination theory (SDT). SDT postulates that there are three basic human needs (i.e.,
24 competence, relatedness and autonomy), the satisfaction of which promotes self-determined
25 behavior and well being. The need for autonomy refers to individuals' desire to determine

1 their own behavior. The need for competence was described as individuals' striving to feel
2 efficacious and achieve desired outcomes. Lastly, the need for relatedness refers to
3 individuals' efforts to be accepted by and attached to others within a social context.
4 According to Ntoumanis and Biddle (1999), a task-involving climate can satisfy these three
5 needs. This is because a task-involving climate provides choice of tasks and allows athlete
6 input in decision making (see the authority dimension of TARGET; Ames, 1992) thus
7 nurturing the need for autonomy (Sarrazin, Guillet & Cury, 2001). In contrast, in an ego-
8 involving climate student choice is very limited or non-existent. Moreover, a task-involving
9 climate is also associated with higher perceptions of competence and success (Sarrazin et al,
10 2001, which is another basic human need according to SDT). This is because it encourages
11 individuals to use self-referenced criteria (i.e., individual effort and improvement) to judge
12 their competence (see the recognition and evaluation dimensions of TARGET; Ames, 1992).
13 These criteria are more controllable and, therefore, more easily attained compared to the
14 normative criteria encouraged by an ego-involving climate. With regard to relatedness, the
15 third basic need advanced by SDT, it is logical to assume that the constant inter-individual
16 comparison promoted by an ego-involving climate (Newton et al., 2000) is unlikely to
17 strengthen social links among athletes. In contrast, a task-involving climate downplays
18 normative comparisons and promotes co-operation among athletes (see the grouping
19 dimension of TARGET; Ames, 1992), and, therefore, it should promote relatedness. A study
20 conducted by Sarrazin and colleagues (2001) supported the hypothesized links between
21 motivational climates and the three needs. In their investigation, competence, autonomy and
22 relatedness were positively predicted by a perceived task-involving coach climate, whereas
23 perceived ego-involving coach climate was negatively linked to the satisfaction of these
24 needs.

Given the lack of information in the sport psychology literature on the motivation-related aspects of peer interactions, the purpose of this study was to use in-depth interviews and identify the structure and dimensions of peer induced motivational climate in youth sport. In this investigation, we tried to tap the broader perceived motivational climate that includes aspects of social affiliation and perceived autonomy as well as issues of achievement and competence. Environmental dimensions relevant to both achievement goal theory (e.g., emphasis on individual effort, intra-team comparison) and self-determination theory (i.e., support for competence, autonomy and relatedness needs) were hypothesized to emerge from this qualitative investigation as identifiable facets of the peer motivational climate. Moreover, some of the TARGET structures (Ames, 1992; Epstein, 1989) were also hypothesized to be pertinent to induced motivational climate namely, authority, recognition, evaluation and grouping. That is because peers can choose who to play with, praise and recognize and the criteria for recognition and evaluation. The Task and Time TARGET dimensions were not expected to emerge from the interviews because the structure of tasks and the time allocation for skill practice are usually determined by the coach. However, it should be stressed that while we hypothesized certain themes to emerge based on existing theoretical and empirical work on the perceived motivational climate, our study was also exploratory in nature and, attempted to identify new dimensions. Moreover, in any study (including qualitative ones), specific research questions and a very good search of the literature are necessary in order the investigator to know what he wants to find out, to maintain control of the interview, and to enhance the quality of the responses (Patton, 2002, page 375). In other words, our theoretical framework was useful in order to hypothesize, analyze and code some of the themes (Kvale, 1996), but it did not bias the interviews by formulating leading questions (see *Interview schedule* and *data analysis* below). As a consequence, new themes emerged that we did not hypothesize for.

Method

Participants

The sample ($N=30$) consisted of 16 females and 14 males from West Midlands, with ages ranging from 12 to 16 years ($M=14.13$, $SD=1.38$). Children above the age of 12 were selected, because most children at this developmental stage should be able to distinguish between effort and ability and, thus, are capable of differentiating between ego- and task-involving achievement criteria (Nicholls, 1989). The participants were British, predominantly Caucasians (77%), and were recruited from different school, club and county teams. The participants were involved in both individual ($n=9$) and team sports ($n=21$). These sports were basketball ($n=6$), hockey ($n=5$), rugby ($n=4$), judo ($n=4$), football ($n=3$), netball ($n=3$), swimming ($n=3$), and track and field ($n=2$). Sport participation history ranged from 1 to 11 years ($M=4.13$, $SD=2.31$) and participation level ranged from school teams to county teams. When sampling, we made an effort to ensure variability in sport experience as well as participation levels within and across sports. Furthermore, the coaches helped the researchers to target athletes with different ability level and social status, in order to avoid interviewing the most competent or popular ones. Prior to the main study, a pilot study was conducted that included 2 females and 2 males ranging in age from 14 to 16 years ($M=15$, $SD=0.82$). These athletes were involved in basketball, rugby, hockey and judo and had a mean sport participation of 4 years.

Interview Schedule

The most widely used framework for qualitative inquiry in sport and exercise psychology research is the employment of the interview method followed by content analysis (Côte, Salmela, Baria, & Russell, 1993). An interview format with open-ended questions was selected as the most appropriate means of obtaining rich and diverse information regarding the motivational climate created by peers in youth sport. The content and the design of the

interview schedule were devised based on relevant literature from the developmental and sport psychology literature, methodological sources on qualitative interviewing (Denzin & Lincoln, 2000; Kvale, 1996; Mason, 1996; Patton, 2002), and information gained from the pilot study.

A standardized format was used for the interview schedule. Each participant was asked the same questions in the same way, except from the follow-up probes that were utilized in order to elaborate and clarify some responses. However, the sequence of the questions varied according to the flow of the conversation. Thus, while the interview was structured and standardized, there was flexibility in relating the interview to the participants and the way they presented their experiences. This allowed greater depth of information as well as the building of rapport.

The interview guide consisted of three parts. The first part included general information about the scope of the study, written definitions of motivation and of task- and ego- goals, as well as questions regarding participants' background and sport history (age, sport, years of participation and competitive level). Motivation was described as the why of doing things and the personal meaning of success and failure. Task and ego goals were described using the following statement: "In sport, we have two different situations which all athletes experience very often. The first is when the athletes feel competent because they give maximum effort for both easy and difficult tasks, they try to improve their weaknesses and don't worry about how good they are compared to others. In the second situation, athletes feel competent only when doing better than others and they are very aware of how good or bad they are compares to others". Those definitions were provided to the participants in a written form in order to be revisited at any time during the interview. The definitions of the achievement goal states were provided as an impetus to eliciting details from the interviewees regarding how and when their teammates put them (or other members in the team) in each of

the aforementioned situations. When the interviewees agreed that they understood these definitions, the second part of the interview commenced.

In the second major part of the interview, 16 open-ended questions were asked regarding the influence of peers on the interviewees' motivation and vice-versa. Some example questions from the interview guide are: (1) "Can you describe the atmosphere within your team, in training and in competitions (what do you and your teammates do and say)?" (2) "Can you tell me when (and how) your teammates make you or any other member in the team be in situation 1 (or 2)?" (3) "When you make mistakes, what do your teammates do or say to you?" (4) "Do you think that your teammates' behavior influences how you play or how good you think you are?"¹ For each question, follow-up, detail-oriented (i.e., when, what, how and why questions), elaboration (i.e., "could you say some more about that?") and clarification (i.e., "what do you mean by that?") probes were used. Lastly, the third part of the interview allowed the participants the opportunity to make additional comments and clarifications about the content of the interview.

Interview Procedure

The study had the approval of the Ethics Subcommittee of a British university. All the interviews were conducted by the first author. A pilot study was first conducted to determine the clarity of the interview questions, the total interview time, and to obtain feedback from the young athletes that could improve the interview schedule. A few changes in the interview schedule were made following the pilot work. For the main study, a first visit was arranged, after prior agreement with the coach, in order to inform the athletes about the nature and purposes of the present investigation. In the same visit, the coach consent form was obtained and the athletes who accepted to participate in the study received parental and child informed consent forms. Twenty four individual and two group (in groups of 3) interviews were employed and each interview lasted between 30-60 minutes. The group interviews were

1 conducted in order to try to elicit more in-depth answers regarding peer influence in sport as
2 well as responses that might not have been revealed in the individual interviews by using the
3 dynamics and interactions of the group. However, it should be noted that no differences in the
4 responses from the individual and group interviews emerged and therefore no more group
5 interviews were conducted.

6 The interviews with the athletes were held in a second visit in a private room without
7 distractions. In the interview room, only the interviewer and the interviewee(s) were present.

8 A portable micro-cassette dictator with a built-in microphone and a notebook were used for
9 the interviews. All interviews were audio-taped and the participants were informed that the

10 tapes would be destroyed at the end of the study. Moreover, participants were reminded that
11 their responses were confidential and that they could terminate the interview at any time. At
12 the end of the interview, the participants were asked to evaluate their interview experience.

13 All interviewees found the experience very positive and felt appreciative of the opportunity to
14 discuss in depth the relationship with their teammates.

15 The interviews were transcribed verbatim by the interviewer. Some ($n = 8$) of the
16 interview transcripts were randomly picked and returned to the participants in order to check
17 the content and the quality of the transcripts. No changes were recommended by the
18 interviewees.

19 *Data Analysis*

20 Content analysis was used to analyze the interview transcripts. Content analysis is a
21 procedure that organizes transcribed material by coding large amounts of interview data into
22 blocks that represent a common theme (Côte et al., 1993). There are two ways of conducting
23 content analysis: inductively and deductively. With inductive analysis, new themes and
24 categories emerge from the interviewee quotes, while deductive analysis uses a pre-existing
25 set of categories (usually based on existing theory and research) to organize the quotes

(Patton, 2002). In this project, both deductive and inductive content analyses were used. That is, the analysis started deductively by coding quotes based on the theoretical framework we outlined in the introduction and continued inductively by combining the remaining quotes, as well as some of the quotes that had been previously grouped deductively, into new themes and dimensions. The combination of inductive and deductive content analyses is advanced by qualitative methodologists (e.g., Patton, 2002), as well as by researchers (e.g., Meyer & Wenger, 1998), as the most pragmatic way of conducting content analysis since no researcher formulates a study without some initial hypotheses stemming from previous research and relevant theory. In the literature, content analysis has also been labeled as cross-case analysis (Miles & Huberman, 1994). In the present paper, the term content analysis is used since it has typically been employed in previous qualitative investigations in sport psychology (e.g., Meyer & Wenger, 1998; Scanlan, Ravizza & Stein, 1989; Weiss, Smith & Theeboom, 1996).

Coding process. Firstly, the authors read the 217 single-spaced pages of the transcribed interviews until they became very familiar with the transcripts. Then, a random sample of 6 transcripts was selected and the first two authors independently identified raw data themes that described peer interactions and their influence on teammates' motivation and behavior. Raw data themes with similar meaning were combined into groups. These groups were named lower order themes and represented the basic unit of analysis. Then, the lower order themes with similar meaning were combined into higher order themes. Finally, the latter were categorized into dimensions which represent the highest level of abstraction since no further meaningful grouping could be formed. Then, the investigators came together and extensively compared and discussed their analyses until agreement was reached. The content analysis of the remaining 24 interviews was conducted by the first author only. Individual and group interviews were analyzed in the same manner since no differences on the content

of the individual and group interviews emerged. That is, the responses given by each individual in the group interviews were coded as unique quotes.

After the analysis of the remaining 24 transcripts was completed, it was independently checked by the second and third authors who provided feedback. The three authors came together again to discuss the findings. As a result of this meeting, further changes were made until consensus was reached. In a further step, another researcher who was not aware of the results of the content analysis was asked to cross-validate the coding process. Specifically, the higher order themes and their respective dimensions were randomly given to this researcher who was asked to group them together. Her grouping was 86% in agreement with our coding process. This percentage is high and similar to the percentages of inter-rater reliability reported in the literature (e.g., 81% in Weiss et al., 1996). The analysis terminated with the tabulation of frequencies tables for the higher order themes and dimensions of the total sample. The frequencies were also broken down by gender, age and type of sport². The frequencies were calculated in order to determine in this exploratory research the distribution of themes across the participants. Frequencies tables, along with quotation examples from the interviewees, are the most appropriate and most common way of presentation of interview data in sport psychology literature (Culver, Gilbert & Trudel, 2003).

Results and Discussion

The content analyses of the interview responses regarding the motivational climate created by peers in youth sport yielded 11 dimensions, 27 higher order themes and 113 lower order themes. Table 1 shows the general categories (i.e., dimensions) and their specific themes (i.e., higher order and lower order themes), as well as contains the number of participants and the associated percentage in each higher order theme and dimension. As the percentages indicate, the dimensions of peer motivational climate were strongly represented across the total sample (percentages range from 43% to 100%), with most dimensions having

a representation rate greater than 70%. The dimensions that emerged from the interviews were labelled: improvement, equal treatment, relatedness support, mistakes, cooperation, effort, intra-team competition, normative ability, autonomy support, evaluation of competence and intra-team conflict.

Dimensions of Peer Motivational Climate

Improvement. The dimension of improvement, reflected in the responses of all the interviewees (100% of the total sample), is defined as encouraging and providing feedback to teammates to improve. The higher order themes from which this dimension emerged are: (a) encourage and praise to improve, and (b) provide feedback. As a 15-year old boy (rugby) mentioned:

Well, a couple of them, the captain and the people that like give the talks at half time, they say that “you should usually just think about yourself, cause you have got to concentrate on how good you are doing not on how other people are doing”...when sometimes we have training for county there is a few people that run and they like tell you to worry about how to improve yourself ...don’t concentrate on them [others], concentrate on yourself and see how you improve your game.

As can be seen in Table 1, the dimension of cooperation also included items that emphasized improvement. However, in the case of cooperation the improvement quotes refer to helping teammates to improve their own weaknesses through teamwork, while the improvement dimension refers to whether athletes encourage their teammates to concentrate on improving their own performance and not on the performance of others. Nevertheless, both dimensions are important facets of a task-involving motivational climate and have been tapped by existing motivational climate measurements (e.g., Newton et al., 2000). According to Ames and Archer (1988), a focus on self-referent improvement leads to more adaptive

beliefs about the causes of success and sustains individual involvement in learning even when perceived ability is low.

Equal treatment. The equal treatment dimension illustrates a task-involving motivational climate as everyone has an important role in the team and all athletes treat their teammates in a non-preferential way. This dimension was indicated by the responses of most of the interviewees (97% of the total sample). The higher order themes included in this dimension were (a) make everyone feel important, and (b) treat all teammates equally. An example of a quote that exemplifies this dimension is the following: “They all listen to what you say and everybody listens to everybody else and respects what they say” (13-year-old girl, swimming). The first higher order theme is similar to the factor “Important role” measured by the Perceived Motivational Climate in Sport Questionnaire-2 (PMCSQ-2; Newton et al., 2000), with the difference being that in the present study, the significant others who make everyone feel important are the peers rather than the coach. When athletes get everyone involved in the team decision-making a task-involving motivational climate is perceived and feelings of self-determination are fostered (Ames, 1992).

Relatedness Support. The relatedness support dimension is defined as the fostering and facilitation of the feeling of belonging and being part of a group as well as the creation of a friendly atmosphere in the team. This dimension was indicated by the responses of 97% of the sample and as such, it seems to comprise a very strong factor in peer relations and interactions. The three higher order themes that are included in relatedness support are (a) relate with their teammates, (b) have a sense of unity and (c) create a friendly atmosphere in the team. The first higher order theme referred to providing moral support, caring about, having faith and trusting teammates. For example, a 15-year old female basketball player said: “If you don’t do as well, they will support you, they will tell you not to worry if you don’t do as well as the rest of the teammates, because you can get better at it.” A sense of

unity, the second higher order theme, was evident when the children suggested that their teammates make them feel more like a part of a team and less like an individual.

The third higher order theme refers to the existence of a friendly atmosphere in the team which can have a positive influence on athletes' motivational experiences. Those consequences can be clearly seen in the comments of some young athletes: "They make you really good friends so you don't compare yourself to them and how good they are" (13-year old girl, hockey), and, "Because we all get on so well we work together, we say things a lot easier to each other" (16-year old girl, hockey).

Relatedness is one of the three basic human needs, along with competence and autonomy, which have been advanced by self-determination theory. Relatedness refers to the feeling of being connected to others within a social milieu, the feeling of belonging to a group and the desire to be accepted by others (Deci & Ryan, 2000; Vallerand, 2001). The analysis of the interview data clearly shows that supporting this need is an important factor of a task peer climate. Based on the work by Ntoumanis and Biddle (1999) and Sarrazin et al. (2001), it could be argued that a perceived task-involving motivational climate can support the need for relatedness. Moreover, based on the interview data, a number of consequences of feeling accepted or not (part of feeling related) by their teammates were discussed by the young athletes. The interviewees indicated that peer acceptance resulted in feelings of being a valued member of the team, the downplaying of inter-individual comparison, increased effort, feelings of friendship, and less frequent performance worries. On the other hand, a perceived lack of peer acceptance resulted in the exertion or withdrawing of effort, an emphasis on normative ability, and perceptions of inferior competence compared to teammates. These findings suggest that peer acceptance can influence the motivation and self-perceptions of children in the sport context

Mistakes. The mistakes dimension refers to worries about how teammates might react if athletes make mistakes, as well as to actual positive and negative reactions from teammates when athletes make mistakes. Responses reflecting this dimension were given by almost all (97%) of the young athletes. The higher order themes underpinning this dimension were: (a) encourage teammates after making mistakes, (b) worry about teammates' reactions when making mistakes and (c) respond negatively to teammates who make mistakes. The following quotation of a 16-year old girl (hockey) exemplifies the first higher order theme:

If you have made a mistake and they say "oh, don't worry about that, you know, carry on, you are doing fine" that really helps a lot ...and also, if they are encouraging you [after making mistakes], you don't notice what everyone else is doing and... you are not put down if others are better than you, you don't compare yourself because everyone else is saying keep going you are doing well.

Both positive and negatives responses to mistakes were described; behaviors that could potentially create either a task-involving or an ego-involving motivational climate. More specifically, when mistakes are viewed as part of the learning process and encouragement is provided by teammates, a task-involving peer motivational climate would be expected to be in operation. In contrast, when peers criticize their fellow athletes, make them worry about their mistakes, and evaluate their ability based on the mistakes they make, a peer ego-involving climate should be perceived. In such a climate, athletes' perceptions of ability would be expected to be more fragile (Ames, 1992; Newton et al., 2000). Worries about mistakes are assessed by existing motivational climate measures (Goudas & Biddle, 1994; Papaioannou, 1994; White, 1996) but, in this case, worries about mistakes reflect athletes' perceptions of and affective responses to error-related interactions with peers.

Cooperation. The cooperation dimension is defined here as helping each other and working together in order to learn new skills. Responses reflecting this dimension were given

by 90% of the total sample. The higher order themes underpinning this dimension were: (a) help others/help each other learn, and (b) work together. Some example quotes are: “We tell each other how to do the throws right and how to do the hold downs properly” (12-year old girl, judo), and “When people feel weak the team normally gets behind them and encourages them and... especially works with them or are close to them to help them improve” (14-year old boy, rugby). This dimension suggests that athletes need and use the help of their teammates in order to learn new skills and improve. In past research, beliefs that success stems from cooperation and teamwork have been linked to task orientation (Duda & Nicholls, 1992). The promotion of athlete cooperation by significant others (e.g., coaches, PE teachers) is measured by existing motivational climate instruments (Newton, et al., 2000; Papaioannou, 1994) as one of the facets of a task-involving motivational climate. However, the cooperation dimension that is described here taps whether the athletes themselves are keen to promote cooperation and help each other learn new skills. The emphasis by adults on cooperation and group learning has been shown to be motivationally beneficial and to create a task-involving climate that sustains children’s involvement in learning (Ames, 1992; Ames & Archer, 1988). It would be interesting to examine whether athletes’ emphasis on cooperation in their interaction with peers also results in similar motivationally adaptive outcomes.

Effort. The effort dimension measures whether athletes emphasize to their teammates the importance of exerting effort and trying their hardest. Effort was indicated in the responses of 87% of the sample. Higher order themes under this dimension were: (a) emphasize exerting effort, (b) encourage teammates to put forth more effort/ maximum effort, and (c) get along with teammates who try hard and are dedicated to the trainings. It is interesting to note that when the interviewees were asked to indicate when their teammates make them be in situation 1 (i.e., a task-involving psychological state), the responses that

emerged primarily revolved around the effort dimension. The following quote from a 14-year-old boy who played rugby is one example of this dimension:

People say ..no matter what game we are playing, we should always put maximum effort in it, and I feel if someone isn't putting effort in, the team [should] get behind [him/her] and they [should] encourage [him/her]... you will say after the training session "well done, you have played really well, it's good to see putting all the effort".

Emphasis on exerting maximum effort is an important facet of a task-involving motivational climate created by the teacher and the coach (Ames & Archer, 1988; Newton et al., 2000), and as evident here, seems also an integral aspect of peer motivational climate. When children perceive an emphasis on effort in the classroom, they display more adaptive motivation, they prefer tasks that are challenging and use effort attributions to explain success and failure (Ames & Archer, 1988). Similarly, research in youth sport (Theeboom et al., 1995) has provided additional support for the adaptive motivational responses of children in a task-involving climate. In the investigation of Theeboom and colleagues (1995), children who were in a task-involving group that emphasized effort, experienced more satisfaction with the sport activities and exhibited better motor skills than those in the ego-involving group.

Intra-team competition. The intra-team competition dimension, which reflects an ego-involving motivational climate, was composed of two higher order themes: (a) strive to outperform teammates, and (b) compare with others. The dimension of intra-team competition was cited by 87% of the total sample. An example of the first higher order theme is presented in the following quote of a 15-year old boy (rugby): "If like someone is putting me down about something then someone else might say 'oh, if you want to get back to him just do better than him". The second higher order theme included themes that referred to inter-individual comparison. The following quotation from a 15 year-old boy (judo)

1 represented this higher order theme: “We won’t really say they are not good, we will just say
2 they are not like as good as someone else”.

3 Intra-team competition is assumed to promote an ego-involving motivational climate
4 (Ames, 1992) and has been studied from a PE teacher and coach, but not peer, perspective.
5 The promotion of inter-individual competition and comparison by the peer group will affect
6 athletes’ judgments and concerns about their ability and the ability of others. Inevitably, some
7 athletes in the group will perceive themselves to be less able than the rest and this perception
8 might be shared by their peers. These perceptions of maladaptive ability may lead to
9 maladaptive motivational patterns such as the display of low effort and the avoidance of
10 challenging tasks (Ames, 1992).

11 *Normative ability.* The emphasis on displaying normative ability and the preference
12 for the most competent players define the normative ability dimension. The higher order
13 themes from which this dimension emerged were: (a) emphasize normative ability, (b) prefer
14 the most competent teammates, (c) most competent players play a more central role, and (d)
15 emphasize/care about winning. Eighty three percent of the young athletes made reference to
16 this dimension of which 92% made particular reference to “prefer the most competent
17 teammates”, while 44% to 64% made reference to the other higher order themes. The
18 preference for the most competent players was expressed in terms of choosing to be with the
19 most competent players, listening more to the most competent players, and, get the most
20 competent players more involved in the game. The emphasis upon normative ability and
21 normative standards of performance is a defining characteristic of an ego-involving climate
22 and often results in a state of ego involvement (Ames, 1992; Duda & Hall, 2001; Nicholls,
23 1984).

24 Responses from the interviews indicated that some children choose to be and play
25 with teammates with similar levels of ability. It is interesting to mention that some of these

children had lower levels of ability and preferred to train with teammates who had similar levels of ability:

I would probably train with people who are like the same ability, I wouldn't choose like people to be on my team who are better than me, I would rather play against them cause they like make me try harder (15 year old girl, basketball).

This quote suggests that youth sport athletes might find playing with similarly skilled teammates less intimidating. However, although within-group differences in ability are minimized with homogeneous ability grouping arrangements, between-group differences are accentuated and this may exacerbate social comparison and ego involvement (Ames, 1992; Treasure, 2001). In contrast, heterogeneous ability grouping arrangements, evident in a task-involving climate (see the grouping structure of TARGET; Epstein, 1989), discourage ability comparisons and can promote task involvement.

Autonomy Support. The responses from the young athletes indicated another dimension of peer climate, which is not related to achievement or competence, but to the satisfaction of the basic need of autonomy. The autonomy support dimension refers to whether athletes feel that their teammates allow them input in decision making and the way they play. The need for autonomy, based on self-determination theory (Deci & Ryan, 2000; Vallerand, 2001), reflects the desire to engage in activities of one's own choosing and to be the origin of one's own behavior. Research in physical activity settings has shown that autonomy-supportive social contexts tend to satisfy the three psychological needs and through the latter to facilitate self-determined motivation (Standage, Duda, & Ntoumanis, 2003). The dimension of autonomy support that emerged here captures the relative presence or absence of autonomy support. It embodies the higher order themes of: (a) nurture autonomy, and (b) having controlling behaviors/expectations, and was mentioned by 83% of

the sample. Lower order themes that are included in the nurture autonomy theme are “feel free to express their opinion to their teammates” and “feel free to play as they want”.

The second higher order theme refers to the controlling expectations athletes place upon their teammates which result in perceptions of lack of autonomy. A low autonomy supportive/ controlling peer climate is described by a 15-year-old girl from a hockey team:

I just think that they expect me to do a few things that I can't do...it's more like “come on, you know, you've got to do better than that, kind of thing”, and it won't be as friendly, it will be more kind of serious... usually the more competent they want the ball more and probably would be the ones who would be like “oh come on, you should had passed it, I was there, you could had passed it to me”, ...they put more pressure on you.

Ames (1992) mentioned that when children perceive that they have choices autonomy support is provided. However, these choices should not be guided by the intent to minimize effort and avoid failure. On the other hand, controlling behaviors are evident when external pressure is exerted and there is little involvement in the decision making process. Recent research suggests that a perceived task-involving motivational climate can satisfy the need for autonomy in the physical domain (Standage, et al., 2003; Sarrazin et al., 2001). Based on the present results, it could be argued that the facilitation or support of autonomous behaviors is related to a peer, task-involving, motivational climate. Subsequent work should ascertain whether an autonomy-supporting peer climate leads to adaptive motivational patterns and whether a perceived controlling peer climate undermines young people's motivation.

Evaluation of competence. This dimension refers to the criteria athletes use to evaluate their teammates' competence. The evaluation of competence dimension included three higher order themes: (a) evaluation based on personal improvement and task mastery, (b) evaluation based on normative criteria, and (c) evaluation based on positive peer

interaction. Evaluation of competence was mentioned by 70% of the sample, of which 67% made particular reference to evaluation based on improvement and mastery, while only 14% referred to normative criteria. Evaluation based on improvement and mastery is reflected in the following response to the question of whether the interviewee thinks that there are athletes in his team who are not good: “Well ...if they try hard you can’t say anything [i.e., that they are not good]” (15-year old boy, swimming).

Children judge and evaluate their teammates very often, however, as Ames (1992) argued, what is important is to understand the criteria for evaluation as these criteria elicit different patterns of motivation. When children are evaluated based on their effort and personal improvement, it is expected that a task-involving motivational climate is fostered (Ames, 1992), whereas when inter-individual comparison of ability is promoted, it is likely that an ego-involving climate is enhanced. Competence evaluation has been considered to be provided mainly by adults (PE teachers and coaches), but as it appears based on the current findings, their peer evaluation should be taken into account as well. Peers provide an important source of competence information for young athletes. Horn and her colleagues (Horn & Weiss, 1991; Horn & Amorose, 1998) have shown that the criteria children use to assess their competence differ with age; younger children (8-12 years) show greater preference for adult feedback, whereas older children (13-16 years) show greater preference for peer comparison and evaluation.

It is also interesting to mention that some athletes (43%) thought they were good when their teammates encouraged or supported them or when they felt accepted by them. This finding implies that some children evaluate their own competence based on the extent of peer support and acceptance.

Intra-team conflict. The intra-team conflict dimension is defined as the negative and unsupportive behaviors exhibited by teammates and were mentioned by a small percentage of

the total sample (i.e., 43%). Intra-team conflict differed from intra-team competition in that the themes of the former dimension referred to negative behaviors that are unrelated with outperforming teammates. Such negative behaviors seemed to undermine interpersonal relationships, and were, for example, by blaming others for poor performance, making negative comments that put teammates down and emphasizing teammates' weaknesses. The following quotes from a 15-year old boy (rugby) and a 16-year old girl (hockey), respectively, exemplify this dimension: "If I am not confident about something and they say 'oh, that's really rubbish', that will probably make me feel that I am not as good as them" and, "they try to put each other down, 'you know you weren't that good, why did you bother trying' or...oh, did you see how badly it was done by this other person?" As can be seen from the former quotation, some children might experience motivational difficulties as a result of intra-team conflict. The findings suggest that negative and unsupportive behaviors from peers can create an ego-involving motivational climate that can induce feelings of low perceived competence for some children. The literature on perceived motivational climates to date has given limited attention to the consequences of intra-team conflict. However, based on the current findings, it seems that this is an important component of a peer motivational climate.

Summary and Conclusions

This study has focused on peer interactions and relationships and the role they may play in formulating a peer-induced motivational climate in youth sport. The existing literature on the structure and the consequences of perceived motivational climate in achievement contexts such as school, sport and physical education has focused exclusively on the influence of significant adults, whilst ignoring the potential impact of peers. The in-depth interviews conducted in the present research offered considerable insight into how young athletes perceive and create a peer motivational climate. Overall, eleven dimensions of peer motivational climate were identified: improvement, equal treatment, relatedness support,

1 mistakes, cooperation, effort, intra-team competition, normative ability, autonomy support,
2 evaluation of competence and intra-team conflict. Most of these dimensions (e.g., effort,
3 improvement) have been previously identified as dimensions of an adult-created motivational
4 climate; however some new dimensions which have not been tapped by existing motivational
5 climate questionnaires (e.g., intra-team conflict and relatedness support) emerged from the
6 content analysis. The identification of the different dimensions of the peer motivational
7 climate is important because both adults and peers can be key significant others with respect
8 to young athletes' motivation in physical activity settings (Brustad et al, 2001; Carr et al,
9 2000). Thus, by also examining peer relationships in youth sport, a more comprehensive
10 understanding of the various motivational climates (both adult and peer climate) operating in
11 this context might be achieved. Greater awareness of the facets of peer influence that foster or
12 undermine young athletes' motivation may help the modification of the existing peer
13 motivational climate in a team so that its task-involving aspects are strengthened. For
14 example, future intervention work should foster relatedness, emphasize equal treatment and
15 discourage intra-team competition and conflict among teammates.

16 A significant follow-up step to this qualitative investigation is the construction of a
17 valid and reliable questionnaire to assess perceptions of peer motivational climate in youth
18 sport based on the dimensions and raw data themes that emerged from the current research.
19 Although we acknowledge the concern of Duda and Whitehead (1998) regarding the plethora
20 of domain- and significant other- specific measures of motivational climate, we believe that a
21 measure of peer motivational climate is important to capture the unique motivation-related
22 cues transmitted by peers. Further research involving larger samples is also needed to
23 examine differences in perceptions of the peer motivational climate as a function of age,
24 gender, sport, and culture. Moreover, the determination of the relative influence of coach,
25 parent and peer motivational climates upon young athletes' achievement behavior,

1 cognitions, and affect would also be an interesting area of subsequent investigation. The
2 interplay between the climates created by the three significant social agents, the possibility
3 that the peer climate is a reflection of the climate created by the coach or the parent as well as
4 the determination of whether coach or parent initiated climate effects (cognitive, affective or
5 behavioral ones) are mediated by the peer initiated climate are valuable avenues for future
6 research. Furthermore, the motivational consequences of being in a team where the prevailing
7 coach and peer motivational climates are contradictory (e.g., the coach might emphasize
8 individual improvement but the peers might promote inter-individual comparison) need to be
9 explored.

10 An additional avenue for future research would be the examination of the mechanisms
11 by which peers influence children's achievement and competence beliefs. Schunk, Hanson
12 and Cox (1987) suggested that children and their friends come to hold similar achievement
13 beliefs through the processes of modeling (observing). However, Altermatt and Pomerantz
14 (2003) proposed that children possibly formulate their beliefs about competence and
15 achievement by either modeling peers or by participating in conversations in which these
16 achievement beliefs are discussed. Lastly, future intervention studies that attempt to foster a
17 task-involving motivational climate in youth sport settings should take into account the
18 different aspects of peer motivational climate along with the motivational climate created by
19 significant adults.

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- 1 *Table 1.*
- 2 Content analysis of the dimensions of peer motivational climate (continues on the next 6
- 3 pages).

DIMENSION		
Higher Order themes	<i>n</i>	%
Lower Order Themes		
IMPROVEMENT	30	100
a. Encourage and praise to improve	26	87
1. Encourage their teammates to improve on their weaknesses		
2. Encourage their teammates to concentrate on their personal performance and not on others		
3. Encourage their teammates to perform well/to do better		
4. Praise their teammates when they improve		
b. Provide feedback	21	70
1. Advise their teammates on how to improve		
2. Get feedback from their teammates on how they play		
3. Advise their teammates what to do		
EQUAL TREATMENT	29	97
a. Make everyone feel important	21	72
1. Feel that everyone is important		
2. Make their teammates feel valued		
3. Care about everyone's opinion		
b. Treat all teammates equally	28	97
1. Find positive things to say to everyone		
2. Talk to each other		
3. Listen to everyone		
4. Get everyone involved in the game		
RELATEDNESS SUPPORT	29	97
a. Relate with the teammates	23	79
1. Support their teammates/look out for each other		
2. Understand/care about their teammates		
3. Have faith in their teammates		

4. Are honest to each other		
5. Trust their teammates		
6. Depend on each other		
7. Don't push hard on the weaker teammates		
b. Have a sense of unity	15	52
1. Feel as a part of a unit/of a whole		
2. Are pleased when all their teammates play as a unit		
3. Are pleased/feel successful when the team plays well		
4. Are pleased when they contribute to the success of the team		
c. Create a friendly atmosphere in the team	23	79
1. Have fun with their teammates		
2. Feel comfortable with their teammates		
3. Feel relaxed when they play		
4. Choose to be in an environment where all teammates get on well		
5. Get on well with all their teammates		
6. Don't distinguish between friends and teammates		
MISTAKES	29	97
a. Encourage after making mistakes	21	72
1. Encourage their teammates to keep trying after making mistakes		
2. Tell their teammates how to improve after making mistakes		
3. Tell their teammates not to worry about making mistakes		
4. Joke about it/play it down when their teammates make mistakes		
b. Worry about teammates' reactions when making mistakes	18	62
1. Worry about what their teammates may think or say after making mistakes		
2. Worry about letting the team down when making mistakes		
3. Worry that their teammates may think that they are making mistakes when playing		
4. Worry that their teammates won't accept them when making mistakes		
c. Respond negatively to the teammates who make mistakes	18	62
1. Criticize/complain when their teammates make mistakes		

2. Put their heads down/are not happy when their teammates make mistakes		
3. Laugh at their teammates who make mistakes		
COOPERATION	27	90
a. Help others/help each other learn	21	78
1. Help each other improve		
2. Pleased to help their teammates		
3. Teach their teammates new things		
4. Give chances to their teammates to be involved in the game		
5. Help their teammates improve		
b. Work together	22	82
1. Work –play together as a team/there is team effort		
2. Work together as a team to improve their weaknesses		
3. Concentrate on everyone's (team's) strengths		
4. Choose to be with teammates who work well together		
EFFORT	26	87
a. Emphasize exerting effort	16	62
1. Emphasize effort		
2. Set an example on putting effort		
3. Are pleased when their teammates put effort		
4. Are dissatisfied when their teammates don't try hard		
5. Praise their teammates when they put effort		
b. Encourage to put forth maximum effort	18	69
1. Encourage teammates to "keep trying", not to give up		
2. Encourage teammates to put forth more effort/give maximum effort		
c. Get along with teammates who try hard and are dedicated	15	58
1. Choose to be in a team with people who are dedicated/who want to be there		
2. Choose to be in a team with people who put effort in/who try hard		
3. Listen to those who are committed to training		
INTRA-TEAM COMPETITION	26	87

a. Strive to outperform teammates	15	58
1. Try to do better than their teammates		
2. Are pleased when they do better than their teammates		
3. Encourage each other to outplay their teammates		
b. Compare to others	22	85
1. Compare to each other		
2. Compare to better athletes		
3. Compare to the new athletes		
4. Tell their teammates that they are better than others		
5. Tell their teammates that they are not as good as others		
NORMATIVE ABILITY	25	83
a. Emphasize normative ability	16	64
1. Try to show off their skills		
2. Play on their own/do not get others involved in the game		
3. Tease the less competent teammates		
4. Choose to be with people with similar levels of ability		
b. Prefer the most competent teammates	23	92
1. Look up to the most competent teammates to learn		
2. Rely on the most competent teammates		
3. Listen to/care about the opinion of the most competent teammates		
4. Pay attention to the most competent teammates		
5. Praise the most competent teammates		
6. Play the most competent teammates more		
7. The most competent athletes get more respect		
8. Choose to be with the most competent teammates		
c. Most competent players play a more central role	11	44
1. Tell their opinion more often		
2. Don't involve that much the weaker players		
3. Are picked up first by the captain		
4. Don't listen to the other athletes		
5. Abuse their power over the younger ones		
6. Only better players decide what to do		

d. Emphasize/care about winning	12	48
1. Complain when the team doesn't win		
2. Don't want to play when they think the team will lose		
3. Care about/focus on winning		
AUTONOMY SUPPORT	25	83
a. Nurture autonomy	11	44
1. Feel free to express their opinion to their teammates		
2. Feel free to play as they want		
b. Have controlling behaviors/expectations	18	72
1. Feel that they should play according to how their teammates want them to play		
2. Play in a way that they can please their teammates		
3. Expect from their teammates to do specific things		
4. Put pressure on their teammates to do specific things		
5. Expect from their teammates to behave according to their role in the team		
6. Expect their teammates to do better/attain a higher standard of performance		
7. Put pressure on their teammates to do better		
EVALUATION OF COMPETENCE	21	70
a. Evaluate based on improvement and mastery	14	67
1. Evaluate their teammates based on individual effort		
2. Evaluate their teammates based on individual improvement		
3. Think that good athletes are those who are committed to training		
4. Evaluate their teammates based on their overall performance, identifying both strengths and weaknesses		
5. Think those teammates are good who perform a task successfully		
b. Evaluate based on normative criteria	3	14
1. Evaluate their teammates' performance by comparing them with others		
c. Evaluate based on positive peer interaction	9	43
1. Think they are good when their teammates encourage/support		

them		
2. Think they are good when they cooperate with their teammates		
3. Think that they are good because they are accepted by their teammates		
INTRA-TEAM CONFLICT	13	43
a. Display unsupportive behaviors	13	100
1. Blame each other for poor performance		
2. Make negative comments that put their teammates down		
3. Emphasize teammates' weaknesses		
4. Misinterpret their teammates willingness to help them		
5. Do not care about their teammates		

1

2 *Note:* $N=30$. The values listed next to the dimensions represent the number of participants (n)

3 and the percentage (%) of the total sample, while the values listed next to the higher order

4 themes represent the number of participants (n) and the percentage (%) of the particular

5 dimension

1 Footnotes

2 ¹ The interview guide is available from the first author upon request.

3 ² The frequencies tables for the different subgroups are available from the first author upon

4 request.